

# Notice of Allowability

Application No.

10/516,840

Examiner

Marc S. Zimmer

Applicant(s)

SUTO ET AL.

Art Unit

1796

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/03/07 and the interview conducted 01/18/08.
2. ☒ The allowed claim(s) is/are 1-3 and 6-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                                 |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>12/03/07</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                   | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|  | 9. <input type="checkbox"/> Other _____.  |

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Chris Andrzejak on January 18, 2008.

Please replace all earlier versions of the claims with the following:

#### IN THE CLAIMS:

1. (Currently Amended) A self-supporting polysiloxane film, which does not have a specific light absorption band in the visible wavelength range and has an optical transmissivity of not less than 85% at 400 nm and an optical transmissivity of not less than 88% in the wavelength range of from 500 nm to 700 nm, said film comprising a polysiloxane crosslinked by reacting, in the presence of a platinum catalyst, a polysiloxane having an unsaturated aliphatic hydrocarbon group and represented by the average structural formula:  $(1) R^1_a SiO_{(4-a)/2}$  (where  $R^1$  is a  $C_1 \sim C_{10}$  monovalent hydrocarbon group and the subscript «a» is a positive number in the range of  $0 < a < 2$ ) and wherein the polysiloxane comprises  $(R^3 SiO_{3/2})$  units (where  $R^3$  is a  $C_1 \sim C_{10}$  monovalent hydrocarbon group other than a  $C_2 \sim C_{10}$  monovalent unsaturated aliphatic hydrocarbon group)

and/or (SiO<sub>4/2</sub>) units with an organosilicon compound having at least two hydrogen atoms directly bonded to silicon atoms.

2. (Currently Amended) The self-supporting polysiloxane film according to Claim 1, in which the polysiloxane represented by the above-mentioned average structural formula (1) comprises (XR<sup>2</sup><sub>2</sub>SiO<sub>1/2</sub>) units (where X is a C<sub>2</sub>~C<sub>10</sub> monovalent unsaturated aliphatic hydrocarbon group, and R<sup>2</sup> is a C<sub>1</sub>~C<sub>10</sub> monovalent hydrocarbon group other than X) and the (R<sup>3</sup>SiO<sub>3/2</sub>) units ~~(where R<sup>3</sup> is a C<sub>1</sub>~C<sub>10</sub> monovalent hydrocarbon group other than X).~~

3. (Previously Presented) The self-supporting polysiloxane film according to Claim 1, in which the polysiloxane represented by the above-mentioned average structural formula (1) comprises (R<sup>4</sup><sub>n</sub>SiO<sub>(4-n)/2</sub>) units (where R<sup>4</sup> is selected independently from a C<sub>1</sub>~C<sub>10</sub> monovalent hydrocarbon group and a C<sub>2</sub>~C<sub>10</sub> monovalent unsaturated aliphatic hydrocarbon group, and «n» is 1, 2, or 3) and (SiO<sub>4/2</sub>) units, and contains an unsaturated aliphatic hydrocarbon group.

4. (Cancelled).

5. (Cancelled)

6. (Currently Amended) A method of manufacturing a self-supporting polysiloxane film, which does not have a specific light absorption band in the visible wavelength range and has an optical transmissivity of not less than 85% at 400 nm and an optical transmissivity of not less than 88% in the wavelength range of from 500 nm to 700 nm, said method comprising the steps of:

forming an uncured film by coating a substrate with a crosslinkable polysiloxane composition comprising a polysiloxane having an unsaturated aliphatic hydrocarbon group and represented by the average structural formula: (1) R<sup>1</sup><sub>a</sub>SiO<sub>(4-a)/2</sub> (where R<sup>1</sup> is a C<sub>1</sub>~C<sub>10</sub> monovalent

hydrocarbon group and the subscript «a» is a positive number in the range of  $0 < a < 2$ ) and wherein the polysiloxane comprises  $(R^3SiO_{3/2})$  units (where  $R^3$  is a  $C_1\sim C_{10}$  monovalent hydrocarbon group other than a  $C_2\sim C_{10}$  monovalent unsaturated aliphatic hydrocarbon group) and/or  $(SiO_{4/2})$  units, an organosilicon compound having at least two hydrogen atoms directly bonded to silicon atoms, and a platinum catalyst;

producing the self-supporting polysiloxane film by crosslinking the above-mentioned uncured film; and

peeling off the above-mentioned film from the above-mentioned substrate.

7. (Currently Amended) The method of manufacturing a self-supporting polysiloxane film according to Claim 6, wherein the polysiloxane represented by the above-mentioned average structural formula (1) comprises  $(XR^2_2SiO_{1/2})$  units (where X is a  $C_2\sim C_{10}$  monovalent unsaturated aliphatic hydrocarbon group and  $R^2$  is independently a  $C_1\sim C_{10}$  monovalent hydrocarbon group other than X) and the  $(R^3SiO_{3/2})$  units ~~(where  $R^3$  is a  $C_1\sim C_{10}$  monovalent hydrocarbon group other than X).~~

8. (Previously Presented) The method of manufacturing a self-supporting polysiloxane film according to Claim 6, wherein the polysiloxane represented by the above-mentioned average structural formula (1) comprises  $(R^4_nSiO_{(4-n)/2})$  units (where  $R^4$  is selected independently from a  $C_1\sim C_{10}$  monovalent hydrocarbon group and a  $C_2\sim C_{10}$  monovalent unsaturated aliphatic hydrocarbon group, the subscript «n» is 1, 2, or 3) and  $(SiO_{4/2})$  units, and contains an unsaturated aliphatic hydrocarbon group.

9. (Currently Amended) A laminated film comprising an inorganic substance layer on a transparent substrate made from a self-supporting cross-linked polysiloxane that does not have a

specific light absorption band in the wavelength range of 400 nm to 800 nm, wherein the polysiloxane comprises (R<sup>3</sup>SiO<sub>3/2</sub>) units (where R<sup>3</sup> is a C<sub>1</sub>~C<sub>10</sub> monovalent hydrocarbon group other than a C<sub>2</sub>~C<sub>10</sub> monovalent unsaturated aliphatic hydrocarbon group) and/or (SiO<sub>4/2</sub>) units.

10. (Original) The laminated film of Claim 9, wherein said inorganic substance layer is a layer of metal or a semiconductor metal oxide applied by vapor deposition.

11. (Currently Amended) The laminated film according to Claim 9, wherein said crosslinked polysiloxane film is made from a polysiloxane crosslinked by reacting a polysiloxane containing an unsaturated aliphatic hydrocarbon group and represented by the following average structural unit formula (1):



(where R<sup>1</sup> is a C<sub>1</sub>~C<sub>10</sub> monovalent hydrocarbon group and the subscript «a» is a positive number in the range of 0<a<2) and wherein the polysiloxane comprises the (R<sup>3</sup>SiO<sub>3/2</sub>) units and/or (SiO<sub>4/2</sub>) units and an organosilicon compound having at least two hydrogen atoms directly bonded to silicon atoms, in the presence of a platinum catalyst.

12. (Currently Amended) The laminated film according to Claim 11, wherein said polysiloxane represented by the above-mentioned average structural formula (1) comprises (XR<sup>2</sup><sub>2</sub>SiO<sub>1/2</sub>) units (where X is a C<sub>2</sub>~C<sub>10</sub> monovalent unsaturated aliphatic hydrocarbon group and R<sup>2</sup> is a C<sub>1</sub>~C<sub>10</sub> monovalent hydrocarbon group other than X) and the (R<sup>3</sup>SiO<sub>3/2</sub>) units ~~(where R<sup>3</sup> is a C<sub>1</sub>~C<sub>10</sub> monovalent hydrocarbon group other than X).~~

13. (Previously Presented) The laminated film according to Claim 11, wherein said polysiloxane represented by the above-mentioned average structural formula (1) comprises (R<sup>4</sup><sub>n</sub>SiO<sub>(4-n)/2</sub>) units (where R<sup>4</sup> is selected independently from a C<sub>1</sub>~C<sub>10</sub> monovalent hydrocarbon

group and a  $C_2-C_{10}$  unsaturated aliphatic hydrocarbon group, the subscript «n» is 1, 2, or 3) and  $(SiO_{4/2})$  units, and contains an unsaturated aliphatic hydrocarbon group.

14. (Original) A method of manufacturing a laminated film by forming an inorganic substance layer in a vacuum film-forming process at a temperature not exceeding  $300^{\circ}C$  on a transparent substrate made from a self-supporting cross-linked polysiloxane that does not have a specific light absorption band in the wavelength range of 400 nm to 800 nm.

15. (Previously Presented) A self-supporting polysiloxane film according to Claim 1 having a tensile strength of not less than 10 MPa.

16. (Previously Presented) A self-supporting polysiloxane film according to Claim 15 having a thickness of between 5 and 200  $\mu m$ .

17. (Previously Presented) A laminated film according to claim 9 wherein said transparent substrate has a tensile strength of not less than 10 MPa.

18. (Previously Presented) A laminated film according to claim 17 wherein said transparent substrate has a thickness of between 5 and 200  $\mu m$ .

19. (Previously Presented) A laminated film according to claim 18 wherein said inorganic layer has a thickness of 50 to 5000 Angstroms.

The Examiner had contacted Applicant to see if they were amenable to further amending each of claims 1, 6, and 9 to require that the polymer be one that contains  $RSiO_{3/2}$  or  $SiO_{4/2}$  units. The presence of these structural attributes had been earlier contemplated in dependent claims 2, 3, 7, and 8. Applicant was advised that the references that had been cited against these claims, *Mine* and *Katsoulis*, would not

serve as a foundation to reject a claim that had incorporated not only the limitations newly added to claims 1 and 6 as of their December 3, 2007 but also the aforementioned proposed modifications insofar as both of these references teach the formation of films from compositions that would not necessarily satisfy the optical transmissivity limitation given that inorganic oxide particles and crosslinked organopolysiloxane particles respectively are incorporated therein.

Concerning claim 9, it appears that JP 4-20570 only teaches films derived from linear organopolysiloxanes devoid of  $\text{RSiO}_{3/2}$  or  $\text{SiO}_{4/2}$  units hence this document, likewise, now appears to be invalid as a reference against the claims.

An updated survey of the prior art did not yield a reference more germane than those already of record. Accordingly, claims 1-3 and 6-19 are deemed allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:30-5:00.

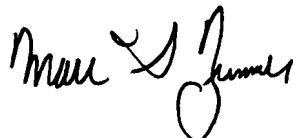
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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January 21, 2008

A handwritten signature in black ink, appearing to read "Marc S. Zimmer". The signature is stylized with a large, looped "Z" and a prominent "M".

MARC S. ZIMMER  
PRIMARY EXAMINER